

**Montana Board of Oil and Gas Conservation  
Environmental Assessment**

**Operator:** Citation Oil and Gas Corporation  
**Well Name/Number:** BSU G326H  
**Location:** SE NE Section 26 T32N R19E  
**County:** Blaine, **MT;** **Field (or Wildcat)** Bowes

**Air Quality**

(possible concerns)

Long drilling time: No, 10 to 15 days drilling time.

Unusually deep drilling (high horsepower rig): No, single derrick drilling rig to drill to 3340' TVD 6,280'MD.

Possible H2S gas production: Slight

In/near Class I air quality area: No Class I air quality area.

Air quality permit for flaring/venting (if productive) Yes, DEQ air quality permit required under 75-2-211.

Mitigation:

☒ Air quality permit (AQB review)

☐ Gas plants/pipelines available for sour gas

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: No special concerns – using small rig to drill 3340' TVD 6,280'MD.

**Water Quality**

(possible concerns)

Salt/oil based mud: No, freshwater, freshwater mud system.

High water table: No high water table anticipated.

Surface drainage leads to live water: No, closest drainage is an unnamed ephemeral tributary drainage to the Sixmile Coulee, about 3/8 of a mile to the northeast from this location.

Water well contamination: No, closest water wells are 3/8 of a mile to the north of this location. Well depths are 90' and 980'. Surface casing will be drilled to 1000' with freshwater and steel surface casing set and cemented to surface to protect ground waters.

Porous/permeable soils: No, silty sandy bentonitic soils.

Class I stream drainage: No Class I stream drainages in close proximity.

Mitigation:

☐ Lined reserve pit

☒ Adequate surface casing

☐ Berms/dykes, re-routed drainage

☐ Closed mud system

☐ Off-site disposal of solids/liquids (in approved facility)

☐ Other: \_\_\_\_\_

Comments: 1000' of surface casing cemented to surface adequate to protect freshwater zones. Also, fresh water mud systems to be used.

**Soils/Vegetation/Land Use**

(possible concerns)

Stream crossings: No stream crossings anticipated.

High erosion potential: No, small cut, up to 5.4' and small fill, up to 7.8', required.

Loss of soil productivity: No, location will be restored after drilling, if nonproductive. If productive unused portion of drillsite will be reclaimed.

Unusually large wellsite: No, large wellsite, 300'X320' location size required.

Damage to improvements: Slight, surface use cultivated field.

Conflict with existing land use/values: Slight, surface use cultivated field.

Mitigation

☐ Avoid improvements (topographic tolerance)

☐ Exception location requested

☒ Stockpile topsoil

☐ Stream Crossing Permit (other agency review)

☒ Reclaim unused part of wellsite if productive

☐ Special construction methods to enhance reclamation

☐ Other \_\_\_\_\_

Comments: Access will be off existing county road, Lloyd Road. About 100' of new access road will be built across cultivated field from the county road, Lloyd Road, into this location. Drilling fluids will be allowed to evaporate in the earthen pits. Cuttings will be allowed to dry in the earthen pits. Pits will be backfilled when dry. No special concerns.

### Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences: Closest residence is about 1/4 of a mile to the north of this location.

Possibility of H2S: Slight

Size of rig/length of drilling time: Small drilling rig/short 10 to 15 days drilling time.

Mitigation:

☒ Proper BOP equipment

☐ Topographic sound barriers

☐ H2S contingency and/or evacuation plan

☐ Special equipment/procedures requirements

☐ Other: \_\_\_\_\_

Comments: Adequate surface casing and operational BOP should mitigate any problems. No concerns.

### Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified): None identified.

Proximity to recreation sites: None identified.

Creation of new access to wildlife habitat: No

Conflict with game range/refuge management: No

Threatened or endangered Species: Threatened or endangered species listed are the pallid sturgeon and Black-Footed Ferret. Candidate species is the Greater Sage Grouse.

Mitigation:

☐ Avoidance (topographic tolerance/exception)

☐ Other agency review (DFWP, federal agencies, DSL)

\_\_\_ Screening/fencing of pits, drillsite

\_\_\_ Other: \_\_\_\_\_

Comments: Private cultivated surface lands. No concerns

### **Historical/Cultural/Paleontological**

(possible concerns)

Proximity to known sites None identified

Mitigation

\_\_\_ avoidance (topographic tolerance, location exception)

\_\_\_ other agency review (SHPO, DSL, federal agencies)

\_\_\_ Other: \_\_\_\_\_

Comments: Private cultivated surface lands. No concerns.

### **Social/Economic**

(possible concerns)

\_\_\_ Substantial effect on tax base

\_\_\_ Create demand for new governmental services

\_\_\_ Population increase or relocation

Comments: Well is a horizontal Sawtooth Formation development well within an existing oil field, Bowes Sawtooth Oil Field. No concerns.

### **Remarks or Special Concerns for this site**

Well is a 3340' TVD 6,280'MD Sawtooth Formation horizontal development well.

### **Summary: Evaluation of Impacts and Cumulative effects**

No long term impacts expected. Some short term impacts will occur.

I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

Prepared by (BOGC): /s/Steven Sasaki

(title:) Chief Field Inspector

Date: April 30, 2010

Other Persons Contacted:

Montana Bureau of Mines and Geology, GWIC website

(Name and Agency)

Water wells Blaine County, MT

(subject discussed)

April 30, 2010

(date)

US Fish and Wildlife, Region 6 website

(Name and Agency)

ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES

MONTANA COUNTIES, Blaine County

(subject discussed)

April 30, 2010

(date)

If location was inspected before permit approval:

Inspection date: \_\_\_\_\_

Inspector: \_\_\_\_\_

Others present during inspection: \_\_\_\_\_